

# SCIENTIFIC AMERICAN.

THE ADVOCATE OF INDUSTRY AND ENTERPRISE, AND JOURNAL OF MECHANICAL AND OTHER IMPROVEMENTS.

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THE SCIENTIFIC AMERICAN  
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By RUFUS PORTER.

Each number of this paper is furnished with from two to five ORIGINAL ENGRAVINGS, many of them elegant, and illustrative of NEW INVENTIONS, SCIENTIFIC PRINCIPLES, and CURIOSITIES; and contains as much Interesting Intelligence as six ordinary daily papers, consisting of notices of the progress of Mechanical and other Scientific Improvements,—American and Foreign Inventions Catalogues of American Patents,—Scientific Essays, illustrative of the principles of the Sciences of MECHANICS, CHEMISTRY, and ARCHITECTURE;—Instruction in various Arts and Trades;—Curious Philosophical Experiments;—Miscellaneous Intelligence, Poetry and, occasionally, Music.

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TERMS OF ADVERTISING.—For 10 lines, or less, 50 cents for the first, and 12 1/2 cents for every subsequent insertion.

## Bachelor's Hall.

Bachelor's Hall! what a queer looking place it is!  
Kape me from sich all the days of me life!  
Sure but I think what a burnin' disgrace it is,  
Niver at all to be gittin' a wife.

See the old Bachelor, gloomy and sad enough,  
Placing his ta-kithle over the fire—  
Soon it tips over—St. Patrick! he's mad enough,  
(If he was present) to fight wid the Squire.

Now, like a hog in a mortar-bed wallowing  
Awkward enough, see him kauding his dough;  
Troth! if the bread he could ate without swallowing,  
How it would favor his palate you know!

His dish-cloth is missing, the pigs are devouring it;  
In the pursuit he has bastered his shin;  
A plate wanted washing—grimalkin was scouring it;  
Thunder and Turf! what a pickle he's in.

Pots, dishes, pans and such grasy commodities—  
Ashes and prata skins kiver the floor;  
His cup-board's a store-house of comical oddities,  
Things that had never been neighbor's before.

His meal being over the table's left setting, so  
Dishes take care of yourselves if you can!  
But hunger returns, then he's fuming and fretting so;  
Och! let him alone for a baste of a man.

Late in the night, then he goes to bed shiverin';  
Niver a bit is the bed made at all,  
He crapes like a tarrapin under the kiverin';  
Bad luck to the pictur' of Bachelor's Hall.

## Paddy's Reflections.

Och! and by thunder, I shall have to knock under,  
For slantherin' Rory O'More.  
Its murther there crying! and there's no denying  
For I've slanthered others before.

I made my confession, for that base transgression  
In slantherin' lymph Sal-ad-or;  
Now what can I say, for the very next day,  
I slanthered Rory O'More.

For old fools without hair not a fig did I care,  
With Coral I'd shaved them before.  
It was not worth a baubee, but now I must flee,  
Or hang for Rory O'More.

I am left without hope, with prospect of rope,  
Glaring and dawning before.  
Italian and Coral, led on to the quarrel,  
And murther of Rory O'More.

The priest says, Paddy be aisy, or in troth ye'll be  
crazy.  
For ye're diseased both behind and before.  
And yer mind is as hazy, and yer lies are as graye,  
Ye scamp, now ye'll dangle for Rory O'More.

That such stuff I should choose, to make people  
que's  
Ought to have hung me before.  
But I'm caught up at last, with my lies sticking fast,  
And the murther of Rory O'More.

## Baby Talk.

Where is the baby? Bless its heart—  
Where is muzzer's darling boy?  
Does it hold its little hands apart,  
The dearest, bessen toy?

And so it does; and will its little chin  
Grow just as fat as butter?  
And will it poke its little fingers in  
Its tunin' little mouth, and mutter  
Nicey nicey words,

Just like little yaller toys?  
And so it will; and so it may,  
No matter what its pappy, mammy say.  
And doens it wink its little eyeses,  
When its mad and ups and ciessies?

And does it squall like chick-a-deen?  
At every thing it sees?  
Well it does? Why not, I pray?  
Aint it muzzer's darlin' evry day?

Och! what's the matter? oh my! oh my!

What makes my sweetest itty chicky ky?

Och nassy, uggy pin, to prick it?

Its darlin' muzzer's darlin' cricket!

There! there! she's thrown it in

The fire! the kuel, wicked pin!

There! iush my honey! go to sleep,

Rocked in e kadie of e deep!

**EXPLANATION.**—This engraving shews a sectional view, in which the peculiarities of the construction are shown, though being concealed by a disc-plate, they do not appear in a view of the wheel itself. The main wheel is represented by the tinted disc, A A A, and has a series of paddles (B B & C C), the ends only appearing in the view) are mounted on the central pivot, D, near the periphery of the wheel. To each of the pivots is attached a yoke E E, and from both ends of each yoke, a round arm or horn projects in the direction parallel to that of the pivot. Another wheel, F G, somewhat larger in diameter than the paddle wheel, is mounted on an eccentric centre, I, the centre of which is below that of the paddle wheel; and to this circle are attached a series of heart-shaped cams, K K, &c. Surrounding each cam, and about two inches distant, is a guard which restrains the horns, which play in the space between the cam and the guard. (These cams and guards are represented in open work in this drawing, the better to represent the several parts; but in the model the cams are solid, as also the space between the guards; and the whole is covered and connected by a disc-plate, so that the spaces between the cams and the guards, are merely grooves in the side of a solid eccentric wheel.) By an attentive examination of the position of the paddles, yokes, and horns, relative to those of the eccentric wheel and cams, it will be seen that the position of each paddle is arbitrarily governed in every stage of its progress round the axle of the wheel; and that each paddle is made to perform one revolution on its own axles during two revolutions round the wheel, presenting alternately its opposite sides or faces to the resisting fluid. The wheel, when prepared for operation, is enclosed in a box or casing, except so much of it as is intended to dip in the water.

**REMARKS.**—This paddle-wheel has been by some, termed a submerged wheel, because it is calculated to work through the bottom of a vessel instead of being placed on the side: but in either case, the arrangements of the paddles is such that they will apply to the water more advantageously than those of the ordinary wheels. There appears to have been unusual excitement of admiration of this invention; at least it has been much praised by the public journals. It is indeed a novel and ingenious invention, and any one conversant with this subject, may readily judge of its utility by its construction. This propeller was invented by Mr. Daniel Deshon, 2d, of New London, Ct., who has secured the patent for the United States, and has taken measures for securing the same in Europe.

**A NEW FLOWER GARDEN IN PARIS.**—A late letter from the gay capital of France contributed to the columns of an exchange journal has the following information:—The fashionables of Paris have thrown into an ecstasy of delight by the opening of a flower-garden on a new plan in the Champs Elysees. It is called *Le Gardin d'Hiver* (the Winter Garden) and is a veritable floral palace. A perpetual summer reigns under its vast glass roof, with an atmosphere as fragrant as the spicy vales of the Indies. Here is found the treasures of all seasons and all climates—the most modest, the most superb plants—flowers of the mountains, and flowers of the valley. Beautiful promenades are laid out, bordered with trees and fringed with evergreens. After threading the petty labyrinths of the garden you enter the saloon, carpeted with green and furnished with ottomans, where the flowers are arranged with such exquisite elegance and art as only the hands of a Parisienne can arrange these delicate creations. The court in front of the garden is always filled with the carriages of those rich varieties of pleasure, who come here to select from two hundred thousand plants, the most beautiful flowers with which to decorate their persons for the ball or the opera, and, as a matter of course, drawing all the dandies and idle fashionables of the capital to this enchanting retreat, so that the proprietor is likely to reap golden harvests from his happy thought as a Winter Flower Garden.

**CAPTAIN FREMONT.**—Extract of a letter just received in Washington, from Jalapa, March 27, 1846:—Letters from Mazatlan of the 4th instant state that Capt. Fremont, with his corps of observation, arrived at Sutter Settlement, on the Sacramento, early in January. He is said to have discovered a good wagon road to Oregon, which is much shorter than any heretofore travelled. He has gone to Monterey, in Upper California, leaving his corps on the Sacramento.

**SIENNA MODE OF PETRIFYING.**—It is said that a process for petrifying animal substances is practiced with great success in Sienna. It consists in the immersion of the substance to be hardened, for a long time in a solution of twelve parts of bichlorate of mercury, and one or two parts of hydrochlorate of ammonia. The natural color of the object is preserved, which is not done by other processes.

**DANGER OF USING A “DICTIONARY WORD.”**—John, said a master-tanner in South Durham, the other day, to one of his men,—bring in some fuel. John walked off, revolving the word in his mind, and returned with a pitchfork! I don't want that, said the wondering tanner: I want fuel, John. Beg your pardon, replied the man, I thought you wanted something to turn over skins. And off he went again, not a whit the wiser, but ashamed to confess his ignorance. Much meditating, (as Lord Brougham would say,) he next pitched upon the besom, shouldering which, he returned to the counting-house. His master was now in a passion. What a stupid ass you are, John, he exclaimed; I want some sticks and shavings to light a fire. O-h-h-h! returned the rustic—that's what you want, is it? Why couldn't you say so at first, master, instead of using a London dictionary word! And, wishful to show that he was not alone in his ignorance, he called a comrade to the tanner's presence, and asked him if he knew what fuel was. Aye, answered Joe, ducks an' geese, and sills like!

**AUDUBON'S QUADRUPEDS OF NORTH AMERICA.**—This great work, now in course of publication, (something more than half of it is already completed,) is of great value to the naturalist, and more than of ordinary interest to general readers. It is a great national work, and should excite the pride and patriotism of all. The drawings are Audubon's, and that is praise enough to all who know his wonderful skill and genius in depicting animated nature. They are spirited and life-like beyond any thing we have ever seen; not even excepting his other work, the “Birds of America.” In some of the animals—the racoon, for instance—the fur is so exquisitely wrought and transparent as to induce the belief, at first sight, that it has been stuck on, instead of being painted on flat surface. Indeed they are all, from the fierce polar bear and huge buffalo, down to the mischievous moles and the destructive mice, exquisitely and spiritedly delineated.

**DIFFERENT READINGS.**—Shakespeare makes one of his characters say—  
“How sweet the moonshine rests upon this bank.”  
The modern reading is thus—  
“ow slick these banks do rest upon (the) moonshine.”

**THE MAGNETIC TELEGRAPH.**—The wonders of this talking machine have not yet begun to be understood, and the extent of its availability can be scarcely imagined. What we will be able to do with it twenty years hence who can conceive? We can easily suppose that a fond husband, at Philadelphia, might hold quite a domestic colloquy with his wife at New York: such as—

“Dear Mary, I'll be home in the 5 o'clock line: have some corn-beef and cabbage for dinner, and don't forget some hot whiskey punch, for I've got a bad cold.”

To which in a few moments the devoted wife answers—

“Dear Charles, tie an extra handkerchief round your neck; the beef is in the pot, and the cabbage is all ready; I've got no whiskey, and somebody has stolen my purse and all my money.”

“That's just like your careless way; ask Mrs. Jones to lend you a dollar until I come—but stop, never mind; I've just given Mr. Vail two dollars for you, and he'll tell the telegraph man at the end of the line to pay it to you. Good bye.”

**SHORT ACQUAINTANCE.**—At a late ball in Baltimore, a gentleman having danced with a young lady whose attractions, both personal and conversational, seemed to have made an impression on his sensibilities, asked, on leading her to a seat, if he might have the pleasure of seeing her on the following day? “Why no, sir,” replied the fair one, “I shall be engaged to-morrow evening, but I'll tell you when you can see me.” “I shall be most happy,” exclaimed the stricken swain. “Well, on Saturday night,” resumed the lady, “you can see me at the foot of Marsh's Market, selling cabbages.” If the young man is wise he'll be there certain, for that girl will make him an excellent wife.

**A WORD TO THE RICH.**—Sir Robert Peel, in his great speech on the Corn Laws, asserts the very close connection between the comforts of the great body of the people, and their morals. The converse is equally true, that destitution is the fruitful parent of crime. But crime is, in some shape, always a tax on property. Is it not, then, the policy of the rich to prevent crime by preventing destitution? And what so good way is there of preventing destitution as by providing employment?

## Glossary of Mechanical Terms.

(Concluded from No. 33.)

**RABBIT OR RAF-IT.**—The strong wooden spring, against which the forge hammer strikes on its ascent.

**RACE.**—The canal along which the water is conveyed to and from a water-wheel.

**RACK.**—A straight bar which has teeth similar to those on a tooth wheel.

**RADIUS.**—The plural of radius.

**RADIUS.**—The semi-diameter of a circle; the arm or spoke of a wheel.

**RASP.**—A species of file, on which the cutting prominences are distinct, being raised by a point instead of an edge.

**RASURE.**—The act of scraping.

**RATCHET.**—A bar containing teeth into which the pull drops to prevent machine running back.

**RATCHET-WHEEL.**—A wheel having teeth similar to those of a rachet.

**RECIPROCATING.**—Acting alternately.

**RECTILINEAR OR RECTILINEAL.**—Consisting of right lines.

**REED.**—Part of a loom, resembling a comb, for dividing the warp.

**REGULATOR.**—A small lever, in watch-work, which by being moved, increases or decreases the amount of the balance spring that is allowed to act.

**REEL.**—A frame on which yarn may be wound.

**REELING.**—The act of winding yarn on a reel.

**RESOLUTION OF FORCES.**—*Vide* “Of the Action of Forces.”

**RESERVOIR.**—A large basin or reservoir of water.

**REVERBERATOR.**—Beating back.

**REVERBERATOR-FURNACE.**—A furnace used in the iron and copper manufactures.

**RIVET.**—To form a head by the percussion of a hammer; to prevent a piece of metal which has been passed through an orifice; to connect things together, from returning.

**ROLLER-GIN.**—A machine to divest cotton of the husk, and other superfluous parts, previous to the commencement of the manufacture.

**ROTARY.**—revolving.

**ROWAN.**—Cotton in that part of the manufacture before it goes to the roving frame.

**RUBBER.**—A heavy file used for coarse work.

**RUBBLE.**—A mode of building: *Vide* Masonry.

**RYND.**—The piece of iron that goes across in an upper mill-stone.

**SAFETY-VALVE.**—A valve which fits on the boiler of a steam-engine to guard against accidents by the steam obtaining too high a pressure.

**SAW-GIN.**—A machine on the principal of the roller-gin.

**SCANTLING.**—The length, breadth, and thickness of any solid body taken linearly.

**SCAPEMENT.**—*Vide* ESCAPEMENT.

**SCOTCHING.**—The operation of packing hemp before it goes to the market.

**WEATHERING.**—The angle at which the sails of a wind-mill are set, to receive the impulse of the wind.

**WEDGE.**—An angularly shaped piece of wood or metal: one of the mechanical powers.

**WEIGHT.**—The measure of the amount of the attraction of gravitation in any body compared with that of other bodies.

**WELDING.**—The property of a conjunction possessed by some metals at high temperatures.

**WHEEL AND AXIS.**—One of the mechanical powers.

**WHEEL-RACE.**—The place in which a water-wheel is fixed.

**WHIP.**—To bind two rods together with small twine: the length of the sail of a wind-mill measured from the axis.

**WHIRL.**—A rotary motion with a decreasing speed.

**WINCH.**—The lever or handle



NEW-YORK, THURSDAY, MAY 7.

**In Self-defence.**—we would again notify our patrons, who receive their papers of local events, that if the paper is not duly furnished, they may attribute the circumstance to the delinquency of the agent in his payments. We must stop the paper from one or more of them next week, unless they pay up.

**CLEVELAND AND PITTSBURG RAILROAD.**—This route has been surveyed, and is represented by the report of the engineer to be exceedingly favorable; the highest grade being only 50 feet per mile, and the smallest curves, on 150 feet radius. The length of the route is 97 miles. This road, in connection with the Harrisburg road, will form a direct communication between Philadelphia and the Lakes.

The railroad between Sandusky and Mansfield is nearly or quite completed: the cars have been running for several days as far as Paris, a distance of 36 miles.

The agent of the Atlantic and St. Lawrence Railroad Company has succeeded in procuring the right of way from Oxford, Me., to Woodstock, on the most favorable terms. A. C. Morton, Esq., has been appointed First Superintending Engineer for the whole distance from Portland to the St. Lawrence.

**CALORIC AND ITS USES.**—Both light and heat are capable of reflection and refraction. If the rays of the sun or of a lamp flame, fall on a concave mirror, both the light and heat are reflected back converging to a focus: and in this focus is found a condensation of both light and heat. When the rays which emanate from the sun or from a lamp, are converged by the refraction of a convex lens, so as to produce an image of the luminary on the surface of an opaque body, the increased density of heat is found to correspond to that of the light. These rays may be condensed by passing through a lens made of ice, and will still retain their heat, so as to produce the ignition of light combustibles. In this way, by a double convex cake of ice, the rays of heat emanating from a heated plate of iron, even when it is not sufficiently hot to be luminous, may be so condensed as to be sensibly felt by the hand placed in the focus. There is evidently an abundance of calorific in the common elements, and which might be had at a cheap rate, could we but find a cheap and ready method of liberating it from its latent state; and the time may yet arrive, in which water will be found to be the cheapest fuel, and be made to furnish both heat and light. Could a method be found of reducing the oxygen to the gaseous state, as readily as we now do the hydrogen, these components would be extensively used for the production of light, if not for heating rooms. We have heretofore introduced the subject of the practicability of producing heat on a large scale by compression; which subject we shall resume in our next, or a future number, and endeavor to illustrate the practicability of thus producing heat without any other expense than the ordinary wear of machinery. Steam, when under a high pressure, contains less calorific in proportion to its density, than when the pressure is light. When steam escapes freely, without restraint, it retains a temperature of 212 degrees: when it is liberated from under a pressure of 100 lbs. per square inch, its temperature will be instantly reduced to about 100 degrees: and if it be liberated from under a pressure of 300 lbs. per square inch, the temperature becomes reduced to fifty degrees or less. Being liberated from under a pressure of 1000 lbs., it will, when liberated produce frost. Atmospheric air contains a large quantity of calorific, even at the temperature of zero, and becomes very hot by being compressed. If air is suddenly compressed under a pressure of 400 lbs. per square inch, its temperature will be raised to above 400 degrees, and will readily ignite splinters of dry wood, and will itself become luminous.

**FRAMINGHAM AND WAYLAND, (Mass.) BRANCH.**—The Legislature of Massachusetts has passed a bill granting a charter for this road, notwithstanding the most strenuous opposition from the Worcester Railroad Company, and all parties therein concerned or interested.

**ATLANTIC AND MISSISSIPPI RAILROAD.**—The bill for the prosecution of the great work of a railroad from Jackson, in the direction of the Alabama line—a link in the great chain connecting the Mississippi river with the Atlantic ocean at Charleston, South Carolina—has finally passed both houses of the Mississippi Legislature, with an appropriation of the U. S. 2 per cent. fund thereto.

**ANOTHER CONNECTICUT RIVER RAILROAD.**—An application is to be made to the next New Hampshire Legislature, for a charter for a railroad on the east side of the Connecticut River, passing through Claremont, Charlestown, Walpole, Westmoreland, and Hinsdale, to the Massachusetts line. This route will probably pass through Winchester to Montague, on the river.

The fare on the Utica and Schenectady railroad has been reduced to two dollars.

About ninety-five railroad trains leave Boston daily, for some twenty-five different stations.

#### Magnetic Telegraph.

The line between Philadelphia and Baltimore is probably finished and ready for operation. The wires across the Susquehanna are sufficiently high to allow vessels to pass under. We have seen several reports of evidences having been procured from New York, and other places, by the Philadelphia lawyers, by means of the telegraph, relating to cases pending in the courts then sitting in Philadelphia: and which evidence was indispensable, and could not have been otherwise obtained in season to be available. The time may, in a few weeks arrive, when a barrister in Philadelphia may, during the progress of the trial of a case in court, subpoena a witness before a Justice of the Peace in Portland, Me., receive his deposition, and present the same to the Court in the former city, with as great facility as if the witness were present, and that without leaving his seat.

**RAILROAD EXCITEMENT IN PITTSBURG.**—We have predicted from the first movement on the subject, that the enterprising people of Pittsburg would have their way, and we think so still, notwithstanding the depression occasioned by the several destructive conflagrations which have occurred in that city within the past year. The persisting determination of the people is evinced in the following extract from a late Pittsburg "American":—

"If the courts can grant the right of way for one kind of a road, they can for another, and released can be had throughout the whole route. The road can be thus made and secured to the makers, despite the despicable dog-in-the-manger course of Philadelphia usurers, thieves, babbling bullies, and robbers. They will also be relieved from any obligation to permit their road to be tapped, and altogether clear of tax on their freight and passengers."

**DON'T KILL THE BIRDS.**—According to the computation of Ornithologists, a black-bird devours, on an average, fifty grubs or worms per day; and a crow, two or three times that quantity. Yet these birds are hunted and destroyed by farmers, on account of their occasional trespasses in the cornfield; not considering that the fruit and vegetables which are preserved by the destruction of the insects, will more than four-fold compensate for the depreciation of the birds. Let the birds live, and your orchards and gardens will be much better for them.

(To be continued.)

any reader who has any information on this subject, is requested to communicate it to me, and I will forward it to the editor of the "American."

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### Selected Articles.

**AN EDITOR'S SUR.**—An editor in Indiana has a journeyman printer worth his weight in gold—a sort of a “rare bird,” a wit, a poet, an orator, a man who is up to every thing under the sun. In the summer, when business is dull, and news becomes scarce, our editorial friend has nothing to do but ring the bell for his journeyman. “Tom” said he, “I want a speech to-day—half a column, done up brown.” “I'll fix it, air,” replies Tom, who proceeds forthwith to his case, and without copy or previous preparation, sets an admirable speech, purporting to have been delivered by some crack orator before the last public meeting. If necessary, Tom makes a wood cut, representing the orator in one of his happiest flights. The speech takes like wildfire, and is considered a splendid effort of genius. Occasionally Tom is called on to grace the editorial chair. “Tom, I shall be absent for a couple of weeks—keep up the steam.” “Yes, sir,” says Tom; and sure enough the paper goes along like a locomotive. Sometimes Tom is requested to knock the argument of a political opponent, or a blackguard editor, into pit. No sooner said than done. Tom goes to his case, with dire indignation upon his brow, and sets up a perfect smasher. The offending wretch is killed to all intents and purposes. In addition to all these qualifications, Tom does all the pugilistic business of the establishment—reports the proceedings of the Legislature—duns the subscribers—keeps the books—attends the public meetings—officiates at the balls and parties; does the stamp speaking of the county; and makes himself generally useful.

**THE LOVE OF FLOWERS.**—There is not in the human heart a more beautiful passion than the love of flowers. It is not only beautiful, but it shows that there is something of purity and holiness within the temple where it dwells. The man, woman, or child, who loves flowers—delights to gaze upon their beauties or inhale their sweet perfume—is not all bad. This feeling ought to be cherished and made to expand by ministering to its desires. The denizens of crowded cities, shut up from the green fields and native flowers, find in a few half-dying plants, transferred from the hot-hove to their windows, a poor substitute. It is, however, better than none. And the poorest tenement, as well as the mansion of the wealthy, can possess this substitute. A daisy, a primrose, or a delicate geranium will cherish and keep alive this love in the heart. Most children are fond of flowers. We have seen few that were not, and those were precocious in vice and depravity. In passing through the market, a few days since, we saw a little girl, poorly but neatly clad, before a flower-stand with her face turned towards the various flowers upon it. We stopped to watch her. After permitting her eyes to wander for a few moments over the whole collection, she fixed them upon a pretty violet. She gazed upon it intently for a little while, then gently stooped down and touched her lips to the modest flower. As she raised up her head and turned to go away, an expression of happiness and gratified love lit up her countenance. We loved that flower too for the pleasure it gave a young and innocent child.

**THEORY OF MARRIAGE.**—There was a merry fellow who supped at Pluto's three thousand years ago, and the conversation turning upon love and the choice of wives, he said, “that he had learnt from a very ancient tradition, that men had been originally created male and female, each individual being provided with a duplicate set of limbs, and performing his locomotive functions with a kind of rotary movement, as a wheel; and that he became so excessively insolent that Jupiter, indignant, split him in two; and since that time that each half runs about the world in quest of the other half; if two congenial halves meet, they are a very loving couple: otherwise they are subject to a miserable, scolding peevish, and uncongenial matrimony.” The search he said was rendered difficult, for the reason that one man alighting upon a half that did not belong to him, another did necessarily the same, till the whole affair was thrown into irretrievable confusion.

**COLORS OF FLOWERS.**—To find the colors that contrast, the following simple and ingenious method may be resorted to:—Take a sheet of white paper, upon which place a red wafer; look at it steadily with one eye for half a minute or so without allowing the eyelids to close, and then look from the red wafer to another part of the white paper; a green spectrum will be seen of the same size as the wafer, and this is the color which would form the true contrast to red. In like manner an orange wafer will produce a blue spectrum, and hence blue is the true contrast to orange, yellow to indigo, green to reddish violet, blue to orange-red, indigo to orange-yellow, and violet to bluish green. By a little attentive study it will be seen how easily any gardener might make himself acquainted with the principles of the science sufficiently to avoid gross errors in the composition of color in his flower-beds.

**THE NATIONAL FAIR AT WASHINGTON.**—We understand that many of the artists, manufacturers, and dealers, of this city, are preparing to send specimens, models, &c., to the great Fair, to be opened at Washington on the 20th inst. It may be well for them to bear in mind that Adams & Co., No. 16 Wall st, have excellent facilities for forwarding in the most safe, careful, and expeditious manner, goods, wares, and models of machinery, between this city and Washington.

**GEN. TOM THUMB.**—The General is even more popular than ever in London. At the Egyptian Hall, his exhibition averages about \$500 daily. At nine o'clock p. m., his proprietor shuts up shop and proceeds to the Lyceum Theatre, where the General plays on shares, which amounts to nearly \$1,200 per week—or \$200 per night. A pretty good income, \$700 for a day and night exhibition. At the Lyceum he plays in a piece called “Hop o' my Thumb.” He will return here in the fall.

**LOVE TO A MOTHER.**—A little Irish boy, the son of a poor widow, once repeated to his teacher four chapters in the Testament. A kind gentleman who was present, was so much pleased, that he called him to him, and gave him his choice of a pair of blankets for his mother, or a suit of clothes for himself. Although he was dressed in tattered garments, and much needed a new suit, he did not hesitate to choose the blankets. The gentleman then gave him the clothes, too, as a reward for his kindness to his poor mother.

**WE'RE NOT TO BLAME.**

Oh pity me lady, I'm hungry and cold,  
Should I all my sorrows to you now unfold  
I'm sure your kind breast with compassion would flame.  
My father's a drunkard, but I'm not to blame,  
My mother's consumptive and soon will depart,  
Her sorrows and trials have broken her heart.  
My poor little sisters are starving—Oh shame!  
Our father's a drunkard, but we're not to blame.

Time was we were happy in plenty and peace,  
And every day saw our pleasure increase:  
Oh then with what kindness we lisped forth his name,  
But now he's a drunkard, and are we to blame?

Time was when each morning around the fire side  
Our sire in the midst like a saint would preside,  
And kneel and for blessings would call on God's name,  
But now he's a drunkard, can we be to blame?

Our father then loved us and all was delight,  
Until he partook of the withering blight,  
And sunk his poor family in misery and shame,  
Oh yes, he's a drunkard, can we be to blame?

Yet we must be censured and shunned by mankind,  
Trod down with contempt and to sorrow consigned,  
Our friends all forsake us and leave us,—oh shame,  
I own he's a drunkard, but we're not to blame.

My poor dying mother must she feel the scorn,  
Must she be forsaken to perish forlorn?  
Oh grieve when I call on that much revered name?  
I must ask the world can she be to blame?

My sisters, poor orphans, O what have they done,  
Why should you neglect them, or why will you shun;  
Let not foul disgrace be attached to their name,  
Their father's a drunkard but they're not to blame?

### To A Sister.

There's beauty in the evening sky  
As the last tints of daylight flee,  
Then fancy radiant mounts on high  
To wean her thoughts of poetry.

There's beauty in the Summer flowers  
And in the Autumn's mellow shades,  
When crimson sunset gilds the hours  
And throws sad glory o'er the glades.

There's beauty in the morning's glow,  
Trembling in gold hues round the sea,  
But ah! such beauty earth ne'er knew  
As lives, sweet Alexine in thee.

Thy form, thy eyes, the silver ring  
Of thy gay laugh upon my ear,  
Thy auburn curls which thou dost fling  
In glut'ring waves upon the air.

They come before me like a dream  
Of loveliness unearthly fair,  
And as I watch the hazel beam  
Of those dark orbs now smiling there.

A wish that thou might'st ever be  
The brilliant picture now thou art,  
Is floating up to heaven for thee,  
To guard from flight thy merry heart.

A prayer is o'er thee Alexine,  
Oh! may a tulism it be  
That changing years no cares may bring  
To mar thy happy destiny.

### “They Will be Done.”

“Come hither, George and Marian,  
Come hither, Isabelle.”

Thus spoke a youthful mother,  
And soft her accents fell.

And George, the rosy, dark-eyed rogue,  
Came bounding at her will;  
And Isabelle, the darling,  
And Marian meek and still.

“Now if you each one prayed to heaven,  
And only one might say,

For what, my precious children,  
Would you this moment pray?”

“Oh! I would pray that God would send  
His bright heaven down to earth,  
Not take from us our loved ones!”

Said George, in thoughtless mirth.

“And I,” said loving Isabelle,  
“Would ask my darling mother,  
That we might together die—  
Thou, Marian, I and brother!”

Then Marian raised her thoughtful eyes,  
Our little, dreaming nun;  
“Be this my prayer,” she murmured—  
“Father, thy will be done!”

### The Seasons.

In fair Spring's fresh budding hours  
What adorns our garden-bowers?

Little flowers.

When departing Spring we mourn,  
What is shed from Summer's horn?

Hay and corn.

What is Autumn's bounteous sign,  
Mark of Providence divine?

Fruit and wine.

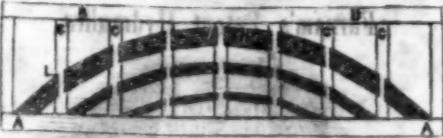
When old Winter, hobbling slow,  
Comes, what do we gain, d'ye know?

Ice and snow.

Gen. Tom Thumb.

### New Inventions.

WRIGHT'S BRIDGE.



**EXPLANATION.**—The principal peculiarity of this bridge consists in the mode of bracing or supporting the side frames, by a succession of arches. A is the string piece, or sill, the ends of which are supposed to rest on abutments. B B, the plate, calculated to support a roof, if required. C C, posts tenoned into the sills and plates. These posts are moreover secured to the sills by iron straps and screw bolts. The arch-braces, O O, &c. are of square solid timber, slightly embedded or gamed into the posts. These side frames are to be duly supported, laterally, by beams and braces, with horizontal braces above and below. We have not yet seen a model of this bridge, but think it would be easily constructed, and answer well for spans of moderate length at least. Invented by Mr. C. D. Wright, of Hebron, Ct.

**SCULPTURE, BY MACHINERY.**—Mr. Thomas Blanchard, of Boston, has invented a machine for copying with great precision, all tangible substances in nature and art, and which executes statuary with consummate accuracy. The machine is of simple construction, but can be graduated to increase or diminish the copy, so as to furnish a colossal or a miniature figure in the proper proportions. Miniature busts of Daniel Webster, and other eminent men, have been taken from the originals, and they present perfect fac-similes. We have not seen this machine, nor any description of its construction, but conjecture that it consists of a drill, or instrument on the drill principle, working with a quick rotary motion, and governed in its vertical and lateral motion, by a parallel point, which is passed over the surface of the object to be copied. A plan has been for some time past matured, by an artist of this city, for carving wood-work on this principle, producing not merely a single copy, but twenty or more copies at the same time.

**IMPROVEMENT IN IRON RAILS AND WHEELS.**—A correspondent of the London Mining Journal proposes the introduction of round or swelled rail-surfaces and hollow or grooved wheel tires, to insure an extraordinary degree of safety in the railway traffic. This improvement evidently combines several advantages, one of which is, that any obstruction or misplaced rail, which would otherwise throw the engine from the track, would not be likely to displace the wheels from the opposite rail. It might render turn-outs and crossings more difficult of construction, but genius might find some method of evading any considerable inconvenience in this respect.

**FITZGERALD'S SCREW PROPELLER.**—We observe a description of this invention, with an illustration, in an exchange paper, in which its excellence is literally set forth. It is even said to have been “fully proved to supersede all others!” Well, if it has, it needs neither recommendation nor public notice; but we can discover therein but little variation from the propeller, introduced by Mr. Beecher about eight years since, and by which we had the pleasure of travelling on the Farmington Canal, at the rate of two miles per hour. Mr. Beecher's plan proved a failure.

**SCARE-FLY.**—Is the name given to a newly invented machine, for the advancement of the comfort, if not the luxury of life. It is constructed on the principle of clock-work, and gently waves a rod with a silk fringe appendage, over the face of a person reclining for repose. This invention is noticed in some of the Albany papers, and we presume the machines are for sale in that city.

**NEW TOILET GLASS.**—A new article, called the Victoria Toilet, has been introduced in England. It consists in part, of two sliding mirrors, which may be drawn out on each side of the ordinary front mirror, thus enabling the lady who sits at the toilet, to see in the glass before her, the reflected image of the back part of her head and dress.

**HEAT OF THE EARTH.**—A late scientific paper asserts that the temperature in an Artesian well at Neuffen, in the Kingdom of Wurtemburg, exhibits a more rapid increase of temperature in proportion to the depth than has hitherto been known in any other locality. In most of the Artesian wells, it has been found that the temperature increased about one degree for every 100 feet, but at Neuffen the increase has been one degree for every 33 feet. The depth of the well is 1250 feet, and the temperature of the bottom is about 104 degrees Fahrenheit. The nearest approach to this great exception from the normal state of things is at Monte Morin, at Tuscany; and it is worthy of remark that at both places, the bottoms of the wells are 120 feet above the level of the sea. The writer thinks that the cause of the anomalies is the ancient heat of the ignited rocks, which being very slow conductors of heat, communicate but a very small portion of it to the surrounding strata; or it would appear, that the crust of the earth is thinner at these places, and consequently that the approach to the interior surface is more rapid than at other places.

**AMERICAN LOCOMOTIVES ABROAD.**—There are twenty-two of Norris's Locomotive Engines finished and ready for the railroads in Austria; and on the four roads extending from Berlin to Frankfort, Potsden, &c., there are said to be twenty-six in operation. This is complimentary to the ingenuity and enterprise of American mechanics.

**UNGALLANT LEGISLATURE.**—It is reported in the Boston papers that four thousand of the fair operatives of Lowell have petitioned the Legislature to protect them against the unreasonable exactions of their employers, by establishing by law the numbers of hours which shall constitute a day's work; but the unfeeling aristocrats only gave leave for the girls to withdraw their petition for several years.

**MORE GOOD FORTUNE.**—Mr. Ethan Standish, a driver of one of the stages between Boston and Plymouth, Mass., has a prospect of inheriting a considerable share of the immense property—said to furnish an income of \$40,000 per annum—belonging to the heirs of the famous Miles Standish.

### Foreign News.

The steamship Cambria, twelve days from Liverpool, arrived on our shores,—though not at Boston,—on Saturday night last. It was about 12 o'clock, the weather being foggy, the ship struck on the beach at Truro, about five miles from the highland light, Cape Cod. The engines were reversed, but all efforts to get her off proved unavailable. The passengers, about 80 in number, were safely landed on shore.

**Affairs in Europe** appear as Pacific as usual. Political prospects remain unchanged. Another bold attempt has been made to assassinate the “King of the French.” He was returning from his drive in the Forest of Fontainbleau, with his family in the carriage, when he was fired at by a man seated upon the wall. Several balls struck inside the carriage, but fortunately no person was injured. The assassin was instantly arrested. His name is Latonate, an old general, and guardian of the forest.

**MARKING TIME.**—It is said that Mrs. Lillie, the royal nurse of Great Britain, who gets for her services about \$1,200 per month, always manages to require similar assistance to that bestowed on her Royal mistress, about six weeks before her Majesty's death.

For the Scientific American.

**Mrs. PORTER.**—I take the liberty to propose to you a few questions on the form and attraction of the earth. I am taught that this planet is oblate, and gravity increases from the equator to the poles. But this involves a difficulty, which I beg leave to submit to your consideration.

1st. Does not the centrifugal force of its particles, caused by its diurnal revolution, combined with attraction, tend to produce a flattened or oblate form?

2nd. Is not the earth sufficiently oblate to equilibrate these forces—or has it not the same form it would assume if fluid?

3rd. If so, and it is in perfect equilibrium, does it not follow that the weight of a body is the same on all parts of its surface? Or if it is not so flat as circumstances require, and weight is greater at the high latitudes,—what prevents the water of the ocean and the air from retreating from the poles, and by accumulating about the equator, produce an equilibrium?

Kingston, Mass.

T. D. S.

Our correspondent appears to have been taught an erroneous theory,—the reverse of the fact,—whoever may have been the author thereof. The weight or gravity of bodies at the surface of the earth, near the poles, instead of being a greater, are lighter than they would be near the equator; and the heavier parts of the water of the ocean are prevented by centrifugal force, from obeying the influence of its superior gravity. The reason of the greater weight of bodies near the equator, is, that the attraction of gravity is more vertical, but less horizontal than at the poles. To illustrate this theory we will suppose the earth to be flattened like a wheel; it is obvious that in this case the attraction of gravity on a body at the poles, would be only horizontal; the body would have no tendency to descend, but would be held in equilibrium; while on bodies at the equator, the entire influence of gravity being exerted in a vertical direction, they would be heavier than on the surface as at present. Thus it is clear that any additional oblateness in the earth would increase vertical gravity near the equator and diminish it near the poles.

EN.

**WELLMAN'S ILLUSTRATED BOTANY.**—While the highest terms of commendation and praise have been lavished on merely ordinary elegant periodicals, a writer finds himself at a loss for forms of expression whereby to represent this work in its true relative character. We can only say there has been nothing published in America that would compare in beauty with the May number of the “Illustrated Botany.” The plates, four in number, and presenting nearly twenty varieties of choice flowers, are colored in the most brilliant style. The Crown imperial, Red Poppy, Sky Flowers, and Haw Thorn, are among this number. The work has already gained an extensive circulation, as it well deserves; being decidedly cheap at \$3 per annum. Published by J. K. Wellman, 116 Nassau st., N. Y.

**SEAR'S NEW PICTORIAL MAGAZINE.**—for May, contains the best variety of subjects and the most beautiful engravings that we have seen in any preceding number. We observe in this number nearly twenty illustrations and embellishments. Several of them elegant pictures: and the reading matter consists of decidedly useful intelligence. Published monthly, in large and heavy numbers, at \$2 per annum, by R. Sears, 128 Nassau st.

**THE DIAMOND POINTED GOLD PENS.**—The editor of the Germantown Telegraph may be assured that these pens are richly worth \$400, each to any editor who has to furnish original matter for his paper; but feeling particularly partial to the “Telegraph” and its editor, we would transfer our old pen—as good as new, if not better—to him for \$300. Good scientific mechanics may be supplied with these pens, however, for \$4 each,—that is, each mechanism.

**MARRIAGE AND DIVORCE IN PENNSYLVANIA.**—About sixty divorces have recently been authorized by the Legislature of Pennsylvania. The cost of the parties is about \$20 each; which added to the ordinary cost of marriage, amounts to not far from \$30 for tying and untying the matrimonial bands. Would it not be well for the same Legislators to regulate the prices according to the duration of the connexion of the parties. It seems very unjust to require as much pay for marrying and unmarrying a couple for a few days or weeks only, as from those who have enjoyed the conjugal felicity for several years.

**DRAWINGS OF MACHINERY.**—Mr. Ethan Standish, a driver of one of the stages between Boston and Plymouth, Mass., has a prospect of inheriting a considerable share of the immense property—said to furnish an income of \$40

**General Agents.**  
Coles & Adriance, 25, 29, 30, 31 Arcade, Philadelphia.  
Hotchkiss & Co., 13 Court street, Boston.

**Local Agents.**

Maine.—Shipley W. Ricker, South Berwick; C. D. Bearce, Portland.  
New Hampshire.—J. A. Fay, Keene; Wm. O. Ruggles, Hanover; C. M. Smith, Manchester; J. Buffam, Nashua; D. L. Norris, Dover.  
Vermont.—Thomas Boynton, Windsor.  
Massachusetts.—S. Thompson, Worcester; B. Perry, Salem; W. P. Seaver, Taunton; P. W. Tenney, Newburyport; Otis Cary, Foxboro; W. Robinson & Co., New Bedford; W. S. Barker, Medford.  
Rhode Island.—Daniel Cobb, Providence; H. J. Pitman, Bristol.  
Connecticut.—Peter Cook, Hartford; E. Downes, New Haven; William Woodward, Middletown; S. Jones, Colchester; J. Hunter, Thompsonville; H. S. Snow, Meriden; Safford & Parks, Norwich; O. P. Butler, Northfield.  
New York.—T. Dickinson, Newark; T. S. Hawks, Buffalo; G. W. Hildreth, Lockport; William M. Beauchamp, Skaneateles; M. Nevin, 158 Fulton street, Brooklyn; M. S. Leonard, Oswego.  
New Jersey.—J. L. Agnew, No. 1 Commerce street, Newark; J. M. Francis, Hoboken; Alfred Walling, Keyport; Lees Garfield, Corner of Main and Market sts., Paterson.  
Maryland.—S. Sands, 122 Baltimore st., Baltimore.  
District of Columbia.—W. H. Ward, Washington.  
Georgia.—Chas. O'Neal, Darien.  
Florida.—Major J. Nathans, Quincy.  
Illinois.—G. W. Arnold, Peru.  
Ohio.—Col. A. P. Cheeley, Huron.  
Wisconsin Territory.—Norris Hubbard, Southport.

**Traveling Agents.**

Clark Selbeck, Frederick Hazeltine, Charles Hartline, Stephen J. Payne, Wm. H. Russell.

**Water-power for Sale.**

*A Rare Chance for a Manufacturer.*

The Water-mills at the head of tide-water, in the pleasant village of East Haven, Ct., and within two miles of New Haven harbor, on an unfailing stream of ten or twelve horse-powers, are for sale at a very moderate price, and on liberal terms of payment. This site is susceptible of a considerable additional power, by increasing the head of water, if required; and its location is such that the cost of transportation of goods to the steamboat landing is merely trifling. A part of the price may remain on mortgage two or three years, if required. For further particulars enquire of Edwin Street, East Haven, or Robert Atwater, 192 Pearl st., N. Y. May 6.

**One Dollar Portraits.**

156 Fulton street, corner of Broadway.

**ROGERS & SEALEY**

Are prepared, with all the improvements in the art of Daguerreotyping, to execute PORTRAITS in a beautiful and finished style.

The following are a few of the many reasons for patronizing Messrs. R. & S.:

One of this firm has been for many years a practical Portrait Engraver, of the first class in this country.

They use the best German Camera, which is considered superior to any other, in giving life and sharpness to the expression of the eye. They have their rooms properly lighted, and in every way adapted to the business.

Copies taken of Portraits, Miniatures, Engravings, &c.

Plain Portraits, including morocco case, \$1.00.  
Colored do. do. \$1.50.

Persons are invited to call and see their own

**PORTRAITS,**

IN DAGUERREOTYPE,

to purchase or not, at their pleasure. May 6.

**GALVANIC BATTERIES**

Of the most simple, safe, and convenient construction for electro-typing, horticultural, and other Galvanic Experiments,

for sale—price 75 cents,—at the office of the Scientific American.

Electro-plating in all its branches, brilliantly executed as above.

**Gurney's Premium DAGUERREAN GALLERY,**

130 Broadway, N. Y.

Pictures taken at this establishment are not excelled in this country—so say his numerous patrons. The public are respectfully invited to call and judge for themselves. May 6.

**Patent Agency**

DRAWINGS and specifications of machines, with other papers requisite for procuring Patents of New Inventions, will be furnished at short notice, at the office of the Scientific American. No charge will be made for advice or instructions on the subject of securing Patents.

Mar. 3.



**DANIEL DAVIS, Jr.**

No. 428 Washington street, (late 11 Cornhill) Boston, Mass., Manufacturers

**ELECTRO-MAGNETIC AND GALVANIC APPARATUS.**

Improved Magneto-Electric Machine, and the instruments for Medical Electricity.

Gilding and Silvering Apparatus, with Instructions.

Dr. Davis's Manual of Magnetism, 228 pages, price 75 cents.

Apr 22d.

**Levi Chapman.**

No. 102 William Street, New York.

Manufacturer of the

**CELEBRATED MAGIC RAZOR STROP**

of four sides.

Also, Pocket Books, Wallets, &c.

On the most extensive scale.

L. C. facilities for manufacturing Pocket Books, or Wallets, for the supply of those wholesale dealers who buy to sell again by the gross or dozen, are unequalled, he having employed for the last ten years from 50 to 270 workmen. His present well regulated system of division of labor, enables him to supply these articles at a very great reduction, at least one third less than former prices.

Strops retailed at from 50 cents to \$1.00 each, varying only in outward finish and size—warranted to please or the money returned.

Jan 22.

**JOHN H. MILLER**  
Book, Job, and Music Printer.

No. 41 Wall Street, in the rear,

New York.

Nov 18

**Plumbe National Daguerrian Gallery,  
AND PHOTOGRAPHIC DEPOT,**

251 Broadway, corner of Murray street, New York, (over Tenney's Jewelry store)

Awarded the Medal, four first premiums and two "highest honors," at the exhibition at Boston, New York, and Philadelphia, respectively, the best pictures and apparatus ever exhibited.

Price of these superb photographs reduced to that of ordinary ones at other places, so that no one need now sit for an ordinary likeness on the score of economy, taken in any weather.

Plumbe's premium and German Cameras, Instructions, plates, cases, &c., &c., forwarded to any desired point at lower rates than by any other manufacturer.

Wanted—two or three skillful operators. Apply as above.

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**CUMMINGTON QUINEBAUG SCYTHE STONES.**

From the celebrated Robbins' Ledge.

MANUFACTURED BY J. S. STAFFORD & CO., Cummington, Mass.—The unprecedented sale of the Cummington Quinebaug Scythe-stones, during two years, has fully established their claim to superiority over all other stones now in use, and renders unnecessary any recommendation from the proprietors.

It is a continuance of public patronage is speedily solicited. All orders addressed to J. S. Stafford, or Jacob Morse, (sole proprietors,) or Stephen Morse, Agent, Cummington, Mass., will meet with prompt attention.

For sale at all the principal hardware stores. Nov 9

**TEETH.**

THE cheapest office in this city for Dental operations is Dr. Brown's, 280 1-2 Broadway, between Reade and Chambers st.

Natural and mineral teeth inserted from \$1 to 350

Decayed teeth filled with white cement, and warranted useful for mastication, 50

Toothache cured effectually without pain, 50

Teeth extracted with less than half the usual pain 50

Dr. BROWN,

280 1-2 Broadway, 3 doors above Chambers, next to Stewart & Co.'s new store.

References can be had from several hundred families, also to the medical faculty of the city. Nov 18

Book for Mechanics.

THE ENGINEER'S AND MECHANIC'S COMPANION.

Comprising Weights, Measures, Mensuration of surfaces and solids, tables of squares and cubes, square and cube roots, circumference, and areas of circles, the mechanical powers, centres of gravity, gravitation of bodies; strength, weight, and crush of materials; water-wheels; hydrostatics, hydraulics, statics, centres of percussion and giration; friction, heat, tables of weight and density; pipes, scantling, and interest; steam and the steam engine.

By J. M. SCRIBNER, A. M.

Recently published, and for sale by

HUNTINGTON & SAVAGE,

216 Pearl st., price \$1.12 to \$1.50.

Jany 1

General Patent Agency.

THE subscriber has established an agency at his Warehouse, 12 Platt street, New York, for the protection and general advancement of the rights and interests of Inventors and Patentees.

The objects of this agency are more particularly to aid and assist Inventors and Patentees in effecting sales of their inventions and of goods and wares made therewith—and also for the sale and transfer of Patent Rights.

Arrangements have been made with a lawyer familiar with the Patent Laws, who will attend to the legal branch of the business upon reasonable terms. Satisfactory references will be given. Applications may be made to the undersigned personally, or by letter, post-paid.

SAMUEL C. HILLS,

April 16 2m\*

A. G. Bagley's Celebrated Improved

EVER POINTED GOLD PEN.

THIS Pen received the highest premium at the last Fair of the American Institute, and has been pronounced by the first teacher of Penmanship in the country to be infinitely superior to any Gold Pen ever before introduced to the American public. The lasting properties of this Pen are undoubted, owing to the total absence of corrosiveness from any of the inks in use, and the peculiar shade of the nibs, (which was first introduced by Bagley,) makes it more pleasant to use, renders it less liable to damage, more easy to repair, and prevents the necessity of the great care that other articles of the kind require.

MANUFACTORY, 189 Broadway, N. Y. Nov 9.

Patent Agency at Washington, D. C.

ZENAS G. ROBBINS,

Mechanical Engineer and Agent for procuring

PATENTS,

Will prepare the necessary Drawings and papers for applicants for patents, and transact all other business in the line of his profession at the Patent Office. He can be consulted on all questions relating to the patent laws and decisions in the United States or Europe. Persons at a distance desirous of having examinations made at the Patent Office, prior to making application, for a patent, may forward (post paid, enclosing a fee of five dollars,) a clear statement of their case, when immediate attention will be given to it, and all the information that can be obtained by a visit of the applicant in person, will be promptly communicated.

All letters on business must be post paid, and contain a suitable fee, where a written opinion is required.

Office of Postmaster, opposite the Patent Office.

He has the honor of referring, by permission, to Hon. Edmund Burke, Commissioner of Patents; Hon. H. L. Ellsworth, late ditto; Judge Cranch, Washington, D. C.; Hon. R. Choate, Massachusetts; U. S. Senator; Capt. H. M. Shreve, Missouri; H. Knowles, Machinist, Patent Office.

April 23m\*

MARSHALL'S TROY SHIRT DEPOT.

AT this Establishment may be seen the largest assortment of Shirts, Bodices, Collars, &c., to be found in the city—all of our own manufacture, in Troy, which we offer to dealers and citizens in general, 25 per cent. below city prices. The above goods have won too high praise to need any puffing from us. It is sufficient to say that we are now patronized by all the principal dealers in the city, and the above goods have been generally approved of throughout the country, for being well made and for cheapness.

Just received—Linen bosom shirts with linen collars and wristbands—warranted—at 62 cents, 75 cents, 87 cents, \$1, \$1.25, \$1.50, \$1.75, \$2. Also linen collars at 4 cents, 6 cents, 12-1/2 cents, 18-3/4 cents, and 25 cents.

MARSHALL'S, 90 Chatham street, N. Y.

N. B.—Northern, Southern, Western and Eastern Merchants, who are making their purchases at the wholesale drug houses, will do well to inquire for goods of our manufacture, as it is sometimes the case, that other kinds are kept by them.

This will be issued monthly, containing thirty-two or more pages, on good type and paper, at the extreme low price of \$1.00 per year, in advance.

Subscriptions should, in all cases, be addressed, post paid, to FOWLER & WELLS,

Phrenological Cabinet, 131 Nassau st., N. Y.

Editors and Postmasters are authorized Agents for this work.

Editors who will give the above three insertions, or who will notice the Journal regularly, shall be entitled to an exchange.

A liberal discount will be made to agents & clubs.

Sample Numbers of the work will be sent gratis when requested.

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29 Broadway, corner of Murray street, New York,

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Awarded the Medal, four first premiums and two "highest honors," at the exhibition at Boston, New York, and Philadelphia, respectively, the best pictures and apparatus ever exhibited.

Price of these superb photographs reduced to that of ordinary ones at other places, so that no one need now sit for an ordinary likeness on the score of economy, taken in any weather.

Plumbe's premium and German Cameras, Instructions, plates, cases, &c., &c., forwarded to any desired point at lower rates than by any other manufacturer.

Wanted—two or three skillful operators. Apply as above.

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General Agents.

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